

INDEX OF SURGICAL PROGRESS.

HEAD AND NECK.

I. The Pathology and Therapy of Pachymeningitis Externa Purulenta after Inflammation of the Middle Ear.

By DR. E. G. HOFFMANN. This is an exhaustive research into the literature, pathology and therapy of this class of cases with histories of three cases of the author's. The paper concludes:

1. That Purulent Pachymeningitis Externa is the most frequent of intracranial diseases complicating inflammation of the middle ear, but escapes diagnosis on account of the indefinite symptoms it causes.

2. It is the most frequent agent in exciting those total intracranial diseases (meningitis, sinus phlebitis, and brain abscess). The latter diseases are favored in their development by prolonged pachymeningitis and retention of its purulent exudate.

3. If the bone be diseased in inflammation of the middle ear, the complication of pachymeningitis must be thought of, if after opening of the mastoid process, the threatening symptoms continue or the symptoms of beginning meningitis, or sinus phlebitis appear. The treatment is operative and follows in most cases the opening of the mastoid process, and has for its object the exposure of the inflamed dura mater.—*Zeitch. f. Chir.*, Bd. 28, heft 4 and 5.

HENRY KOPLIK (New York).

II. A New Method of Transplanting Corneal Tissue.

By C. A. VON HIPPEL. The author holds in connection with this operation. 1. That the transplanted flap dies but *very exceptionally*. 2. The nutrition which comes from its periphery is perfectly sufficient to keep it alive. A new-formation of tissue upon its posterior surface forms a disagreeable complication. 3. Even where there is no such formation of tissue, the posterior layers of the flap may get dim. its tissue

may swell, and a smaller or larger portion of its epithelium may be cast off.

It is first necessary to get by oblique illumination as exact an idea as possible, of the extent of the leucoma in depth and of the existence of an anterior chamber. The author then proceeds as follows:

1. Introduction of the speculum: grasping the eyeball on opposite sides with fixation forceps; putting the trephine vertically upon the leucoma, but without pressure, and cutting off the piece which is to be removed. The diameter should not be more than 4 or $4\frac{1}{2}$ mm. This is always followed by hæmorrhage which is stopped by sublimated ice-cold cotton.

2. Removal of the piece of cornea. For this the author used a strong, straight iris-forceps, with sharp teeth, one branch of which is inserted as deeply as possible into the incision in order to grasp, if possible, the whole thickness of the flap, and stretch it. The removal is done with Graefe's knife.

3. Excision of a corresponding piece of the whole thickness of a rabbit's cornea. The eye is cocaineized. By means of a squint-hook introduced behind the eyeball, it is pressed against the lid as far as possible and fixed in that position. Fixation with forceps alone is not sufficient. If the flap is shifted under the trephine it can not be used. It is, of course, necessary to arrange the trephine so, that it will pierce the whole thickness of the cornea, if there is any iris pigment adherent to the posterior portion of the flap, it must be removed by irrigation with a sterilized 0.6% solution of chloride sodium.

4. Transplantation of the flap to the human eye by means of a rubber spatula—no speculum required. When the hæmorrhage ceases, the flap is laid on the cornea by the side of the defect and slowly shifted into it, taking care to avoid air bubbles. Finally, a slight pressure is exerted on the flap by means of a spatula, in order to give it a good apposition all over. If the flap protrudes over the level of the cornea it is easily displaced.

It is best therefore to take young animals with a thin cornea. After the flap has been brought into the proper position, it is thinly dusted over with iodoform and the lids are carefully closed, the upper one be-

ing lifted over the flap. Both eyes are put under a pressure bandage and remain so for several days. After that time this bandage is changed every 24 hours, and on the eighth to tenth day, the eye operated upon is left unprotected.

The following is the process of healing: After 24 hours slight inflammatory changes are seen, the bloodvessels are more injected, the corneal tissue around the flap to the extent of 1 or 2 mm. in width, is dim, slightly swollen and prominent; the flap itself is either perfectly transparent or slightly steamy. The untouched layer of corneal tissue below the flap reflects the light more strongly, and if it contained blood-vessels these are more injected. In the course of the first week this injection of the eyeball disappears, and the space between the flap and cornea, beginning at the periphery, is gradually obliterated. Neither vascularization nor swelling of the flap occurs. Sometimes small infiltrations are observed near its edge, which, however, disappeared rapidly, and without leaving a trace. After the third week the process of healing seems microscopically to be perfect. In four cases out of eight, the operation was successful, and the author concludes:

1. The possibility of the transplantation of corneal tissue with preservation of its transparency, and the result of a sufficient visual acuity is proven.
2. Even when the leucoma affects the whole thickness of the cornea, the transplantation may be tried with hope of success.
3. Totally adhering and prominent leucomata are to be excepted.
4. The operation is absolutely without danger, causes little suffering, and may surely be performed wherever there is any hope of success.—*Am. Jour. of Ophthalmology*, July, 1888.

JAMES E. PILCHER (U. S. Army).

III. Osteo-Periosteal Flaps in Rhinoplasty. By Dr. V. HACKER. Describes a method of forming a bony bridge to the new nose by removing, in addition to the usual forehead flap, a portion of bone and its overlying periosteum, which form part of the flap. The osteo-periosteal portion of flap is chiselled out of the forehead by cutting a narrow groove down to the diploe all around its borders, which should